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THE GALACTIC WAR

Long ago the galaxy had known peace. Paradise was ruled with the hand of science, and the hand was that of the galactic governing body known as the Core.

Paradoxically it was the ultimate victory, the victory over death itself, which brought about the downfall of their Paradise and started the war that would decimate a million worlds. The process, called "patterning", involved the electronic duplication of brain matrices and allowed the transfer of consciousness into durable machines. Effectively it meant immortality, and the Core decreed the process mandatory for all citizens in order to ensure their safety.

There were many who were unwilling to toss aside their bodies so casually, many indeed who regarded patterning as an atrocity. They fled to the outer edges of the galaxy where they banded together to form a resistance which became known as the Arm. War began, though it was never officially declared by either side. The Arm developed high-powered combat suits for its armies, while the Core transferred the minds of its soldiers directly into similarly deadly machines. The Core duplicated its finest warriors thousands of times over. The Arm countered using cloning. The war raged on for over four thousand years, consuming the resources of an entire galaxy and leaving it a scorched wasteland.

Both sides lay in ruins. Their civilizations had long since vanished; their once vast military complexes were smashed. Their armies were reduced to a few scattered remnants which continued to battle on ravaged worlds. Their hatred fueled by millennia of conflict, they would fight to the death. For each, the only acceptable outcome was the complete and utter annihilation of the other.

GETTING STARTED

SYSTEM REQUIREMENTS

MINIMUM

| | |
|--------------------------|---------------------------------------|
| <i>CPU:</i> | 100 Mhz Pentium or faster |
| <i>RAM:</i> | 16MB |
| <i>Operating System:</i> | Windows 95 |
| <i>Hard Drive:</i> | 40 MB available storage |
| <i>CD-ROM:</i> | 4 X speed CD |
| <i>Display:</i> | 640 x 480 x 256 Colors |
| <i>Input:</i> | Microsoft (or 100% compatible) mouse. |
| <i>Software:</i> | Direct X version 5 must be installed. |

RECOMMENDED

| | |
|-------------|---------------------------|
| <i>CPU:</i> | 133 Mhz Pentium or faster |
| <i>RAM:</i> | 24 MB |

OPTIONAL

28,800 bps modem for modem play

A sound card is recommended for maximum enjoyment of Total Annihilation, but not required. If a sound card is used it must be Direct X compatible

3D Surround Sound System

MULTIPLE PLAYER REQUIREMENTS AND OPTIONS

MINIMUM SYSTEM REQUIREMENTS:

| | | |
|------------------|-------|-------|
| UP TO 4 PLAYERS | P-133 | 24 MB |
| UP TO 8 PLAYERS | P-133 | 32 MB |
| UP TO 10 PLAYERS | P-166 | 48 MB |

GETTING STARTED

OPTIONS:

LAN: a IPX network protocol is required on each computer in order to play a multi-player game.

TCP/IP: a TCP/IP connection may be used for multi-player games

MODEM-TO-MODEM: 28.8 minimum modem required.

NULL MODEM: a null modem cable is required for two players to play a head-to-head null modem game.

QUICK START

If you are new to game playing on the PC, go directly to the section titled Installation and Start-up. If you are an experienced gamer, and are familiar with Windows 95 and Direct X, these instructions are for you.

Place the Installation CD (**Disc 1**) in the CD-ROM drive and install Direct X Version 5 (unless you already have it installed on your system), and then run the Installation for Total Annihilation. When the installation is complete you will be prompted to insert the Game CD (**Disc 2**) in your CD-ROM drive.

INSTALLATION AND START-UP

AUTOPLAY

Place the Installation CD (**Disc 1**) in your CD-ROM drive and wait a moment for the Total Annihilation installation menu to appear.

If you do not see the Autoplay window your CD-ROM drive may not be set up to take advantage of this Windows 95 feature or you may need to upgrade the CD-ROM driver. To check this:

1. From the Start menu, select Settings, and then Control Panel. Double click on the System icon.
2. In System Properties click on the Device Manager tab.
3. At the top of the list you should see CD-ROM. Click the plus sign to the left of this line and double click on the CD-ROM manufacturer name (appears underneath CD-ROM)
4. Click on the Settings tab and look for Auto Insert Notification. If there is a check mark in the box to the left of this line, click the OK button at the bottom of the screen. If there is no check mark click in the box to place one there then click OK.

GETTING STARTED

5. Now click on the tab called Performance (back up to the top). Look for the line "...system is configured for optimal performance." If this line does not appear or says Drive X is using MSDOS compatibility mode you need to upgrade your CD-ROM driver. Contact the manufacturer of your CD-ROM drive or of the computer system.

If AutoPlay has been disabled or is not available you can run the installation program by double-clicking the My Computer icon, then double-clicking the CD-ROM icon, and finally double-clicking SETUP.EXE.

DIRECT X

If you do not have Direct X 5 installed on your computer click on the Install Direct X 5 button. The installation for Direct X 5 will examine your system and report its findings. If you have some Direct X components installed from earlier versions it will list these along with their version numbers. If no Direct X components are detected it will list them as "not installed". Click the Re-install Direct X button. When the Direct X installation is complete, you will be prompted to restart your computer.

INSTALLATION

When you have restarted your computer, run SETUP.EXE (double-click the My Computer icon, then double-click the CD-ROM icon, and finally double-click SETUP.EXE) and click the Regular Install and Play Game button on the Installation menu. Specify a directory for the Total Annihilation files and click OK. The installation program will install the necessary files on your hard drive in this directory. When complete, icons for the game, uninstall program and Readme will be created in a directory on your Start Up menu. Be sure to check the Readme for any last minute information.

UNINSTALL

To Uninstall the game click on the Uninstall icon in the Total Annihilation folder (click on Start, Programs, Total Annihilation). If you have saved games and want to remove them as well be sure to click the check box. Click the Uninstall button and all the game files and icons will be removed. Direct X will not be removed from your system. Contact Microsoft for help with DirectX.

GAME COMPONENTS

Total Annihilation features two fundamental game components: Units and Resources. Units can be Mobile Units (tanks, ships, planes, etc.), or Structures (factories, metal extraction plants, etc.). The most important unit is the Commander. Game components are described in greater detail below. Resources, which consist of metal and energy, are the fundamental building blocks of the other game components. By collecting or reclaiming these basic resources, you will be able to create everything else you need to annihilate your opponent.

UNITS COMMANDER

You are the Commander of the ARM or the CORE. You possess a matter/anti-matter backpack which produces and stores metal and energy. You have one of the most powerful weapons on the battlefield, the Disintegrator Gun. You also have the ability to construct an entire complex of war with your nano-lathe. Your battlesuit will self-repair slowly if it takes damage. Lastly you can gain energy by reclaiming bio-mass (trees and other plants) or gain metal by reclaiming the metal found in wrecks.

MOBILE UNITS

You have access to a full complement of land, sea, and air units, including scouts, transports, construction and combat units. The game begins with just the Commander and his matter/anti-matter backpack. It's up to you to build the necessary units and structures (see below) to mobilize your forces. See How To Play, below, for more information on building structures and units.

STRUCTURES

Structures provide a variety of functions, such as storing energy and metal, constructing mobile units, and acting as offensive and defensive weapons. Structures that build mobile units are known as factories. See How To Play, below, for more information on building structures and units.

RESOURCES

The two fundamental resources available to you are Metal and Energy. Every unit or structure that you build will require a certain amount of each.

GAME COMPONENTS

METAL

Metal is the substance from which all units are created. Metal can be extracted from the ground with a Metal Extractor or reclaimed from the wreckage of destroyed units. Metal deposits look like a rough section of shiny rocks.

ENERGY

Energy powers all activity. Energy can be collected using Wind Generators, Solar Collectors, and several other structures. On some planets organic matter can be converted to energy using one of the many Construction units.

MAIN BATTLE SCREEN INTERFACE

BATTLE MAP

The Battle Map is a top-down 3D perspective of the battlefield's terrain. The mapped (gray) areas are places your units have explored. Your battle map will retain knowledge of terrain but not of enemy activity in that area. The black areas of the screen show unexplored territory.

ORDERS BUTTON

Displays commands available to the unit currently selected. These commands vary depending on the unit's capabilities.

BUILD BUTTON

Displays units and structures that the currently selected unit can build. When a unit does not have this ability, this option is not available.



MAIN BATTLE SCREEN INTERFACE

MINI-MAP

Displays the entire battlefield in the top left corner, showing both terrain and radar information. Units can be given orders with the mini-map.

UNIT COLOR

Your color is displayed in the upper left corner.

SELECTED UNIT(S)

Selected units are outlined in green.

UNIT STATUS BAR

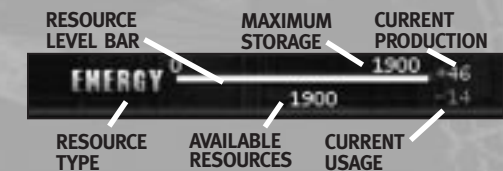
The unit status bar is displayed in the lower left portion of the screen when a unit is selected. The left bar displays the selected unit's health status. The right bar indicates the health status of the unit associated with the selected unit. The notation in the center describes their association.

SENDING MESSAGES

Press Enter to bring up the Message box. Messages typed here will appear on all the other players' screens accompanied by the name of its sender. This is only available in multi-player games.

METAL AND ENERGY RESOURCES

Displays resource information. Shows storage capacity, current production and usage. See Energy Resource bar description, below.



UNIT ORDERS

Select a unit by clicking on it with the left mouse button (see Using the Mouse, below, for information on the two mouse options). When a unit is selected, menus appear on the left side of the screen. The menus display either the orders each unit can be given or its build capabilities. You may give a unit several orders at once. Hold down the "Shift" key while giving multiple mouse commands and the unit will undertake them in order. Units can have standing orders, specialty orders, or immediate orders. The three types of orders are described as follows:

MAIN BATTLE SCREEN INTERFACE

STANDING ORDERS

Standing orders control the unit's aggressiveness and mobility. These orders will determine your unit's basic behavior when interacting with enemy units. This behavior is based on the combination of the aggressiveness and mobility settings. Standing orders are accessed via the top two buttons in the Unit Orders menu.

AGGRESSIVENESS

FIRE AT WILL - The unit will attack any unit in range. Most aggressive setting.

RETURN FIRE - Unit will not fire at an enemy unit until it has been fired upon.

HOLD FIRE - Unit will not fire until ordered to do so. Least aggressive setting

MOBILITY

ROAM - Unit has free range of movement when interacting with enemy units.

MANUEVER - Unit can move within a short range of its starting position to carry out its standing orders.

HOLD POSITION - Unit will not move from current position.

SPECIALTY ORDERS

Specialty Orders apply to specific units, and are accessed via the middle set of buttons.

ACTIVATE / DEACTIVATE

The unit can be turned on and off.

CLOAKING

The unit has the ability to cloak, rendering it invisible to enemy units. Cloaking uses energy.

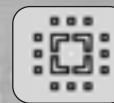
NOTE: The mouse interface you select will affect cursor behavior. The cursor always reflects the left-click function. See Using the Mouse, below, for more information. When using the Left-Click interface, the cursors shown below appear automatically to indicate the effect that a left-click would have in that particular spot. The cursors change as you move the mouse pointer around the battlefield.

MAIN BATTLE SCREEN INTERFACE



LOAD / UNLOAD

The unit has transport capabilities.



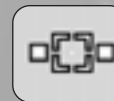
RECLAIM

The unit can reclaim metal and energy from terrain, wreckage and other units.



REPAIR

The unit can be used to repair a damaged unit.



CAPTURE

The unit can be ordered to capture an enemy unit. The larger and more armored the enemy unit is, the longer it will take to capture.

IMMEDIATE ORDERS



MOVE

The unit can be ordered to move to a new position.



GUARD

The unit can be ordered to guard another unit.



PATROL

The unit can be ordered to patrol an area of the map. If a mobile construction unit is told to patrol an area, it will repair all friendly units it meets on its patrol.



ATTACK

The unit can be ordered to attack another unit.



D-GUN

The unit has the Disintegrator Gun.

USING THE MOUSE

STOP

Cancels an immediate or specialty order. All orders that have been queued up with the 'shift' key are also canceled.



BOMB

When bombers are ordered to attack, they show this cursor.

USING THE MOUSE

Total Annihilation supports two mouse interface options: Left-Click interface (the default), and Right-Click interface. Both options use the left mouse button to select a unit, and to click on the Build and Orders menus. You can also left-click and drag to select multiple units. You can change the mouse interface in the Interface section of the Options menu. With both the Left-Click and the Right-Click interface, the cursor continually updates to indicate the action that would result by left-clicking on that spot on the screen. However, because only the Left-Click interface allows you to activate an order by left-clicking on the battlefield, it alone shows the cursor changing to indicate the pending action.

LEFT-CLICK INTERFACE

The Left-Click interface uses the left mouse button for selecting a unit as well as activating an order. To select a unit, place the cursor over it and click the left mouse button. A selected unit displays a green outline. Once the unit is selected, you can use the left mouse button to activate an order. For example, you can move a selected unit to an open field by left-clicking on the field. Or you can order a selected unit to attack an enemy unit by left-clicking the enemy unit. As you move the cursor around the screen, it will change shape to indicate the action that left-clicking would carry out at that location. You can deselect a unit by right-clicking. You can also right-click inside the mini-map view and move the mouse while holding the right button down to scroll the mini-map. You can right-click outside the mini-

BUILDING UNITS AND STRUCTURES

map view to center the mini-map view over that point.

RIGHT-CLICK INTERFACE

As with the Left-Click interface (see above), you select a unit by left-clicking it. Once a unit is selected, use the right mouse button to activate the default order. For example, you can right-click on an open field to move the selected unit there. You can also give a unit orders by left-clicking one of the command buttons on the left side of the screen. See Unit Orders, above, for more information. Use the left mouse button to deselect and to move the mini-map view. Because the cursor only changes to show what the left mouse click will do (as in the Left-Click interface), the cursor does not update to show what the right mouse click will do.

BUILDING UNITS AND STRUCTURES

Construction units and factories can build other units. Select a mobile construction unit or factory, and press the build button just under the mini-map to display the Build menu. Up to six buttons will be displayed, each with a picture showing the unit that can be built. If you move your cursor over these buttons, information about the cost of the unit will appear on the Unit Status Bar at the bottom of the screen. To build a unit, simply click on the corresponding button. You can build multiple units by clicking the button once for each unit to be built. For example, to build five units, click the button five times.

Below the six buttons are two arrows. Clicking on these arrows will move through the selected units other build menus.

TO BUILD A STRUCTURE

Use the Commander or a mobile construction unit to build structures. Click on the picture of the structure you wish to build and place the green outline in the desired location. If the square turns red, the structure cannot be built in that location.

TO BUILD A MOBILE UNIT

Mobile units are built using factories. Left-click on the unit icon in the factory's Build menu to start production. Multiple clicks will queue up the

PLAYING THE GAME

build orders. Right-click to cancel a build order from the queue.

The Main Menu provides you with the following options:

Single: Play one of the campaigns or create a skirmish battle.

Multi: Select from the connection options to start a multi-player game.

Intro: View the intro movie

Exit: Return to the Windows 95 operating system.

SINGLE PLAYER MODE

Click Single to view the single player game options.

New Campaign: Begin new campaign

Skirmish: Play one or multiple AI opponents

Options: Set game preferences

Load Game: Load a previously saved game

Previous Menu: Return to the previous menu

NEW CAMPAIGN

Click New Campaign to begin the first of a series of missions. Once you have chosen a side (Arm or Core) and the level of difficulty, press Next to go to the mission briefing.

Select Side: ARM  CORE 

Difficulty: Select a level of difficulty

Next: Go to mission briefing

Previous Menu: Return to previous menu

MISSION BRIEFING

Selecting Next from the New Campaign screen displays the Mission Briefing screen. This screen will provide you with your mission goal. Click More at the end of the mission description for more information. Click Start to begin the mission.

SKIRMISH

Skirmish mode allows you to play multiple computer opponents on the multi-player maps. This is a good training ground for players who wish to play multi-player games. Select Skirmish from the Single Player Options menu to display the Skirmish Setup screen.

PLAYING THE GAME

Player: You are the first player. You can add up to three computer opponents.

Side: Choose a side, either CORE or ARM, for you and your opponent.

Color: Choose a color for each player.

Ally: Designate alliances by matching symbols.

Metal: Displays the initial amount of metal for each player.

Energy: Displays the initial amount of energy for each player.

SELECT MAP

Select the map for play.

EDIT METAL

Adjust the metal for selected players.

EDIT ENERGY

Adjust the energy for selected players.

COMMANDER

GAME ENDS: The game will end when the Commander is destroyed.

GAME CONTINUES: The game will continue after the Commander is destroyed.

LOCATION

FIXED: Place Commanders at pre-determined locations on the battlefield.

RANDOM: Place Commanders randomly on the battlefield.

MAPPING MODE

UNMAPPED: The Commander starts on an unexplored map.

MAPPED: The Commander starts on a completely explored map.

LINE OF SIGHT

TRUE LoS: Terrain elevations affect unit's view.

CIRCULAR: Elevation does not affect unit's view.

Permanent LoS: All mapped terrain is visible at all times.

START SKIRMISH

Begin game.

PREVIOUS

Return to the previous menu.

PLAYING THE GAME

OPTIONS

Allows you to set game preferences. See Options Menu, below, for more information.

MULTIPLE PLAYER MODE

Total Annihilation uses DirectPlay, which utilizes the networking features of Windows 95. For this to work, you must have the proper devices and/or network protocols installed. See your Windows 95 documentation for details on installing new protocols.

SELECT CONNECTION SCREEN

When you select Multi on the Main Menu, the Select Connection screen appears. At the top of the screen there is a list of the network connection options. Select the appropriate option for the type of network game you want to play. This list will vary from machine to machine, but here are a few of the options you will most likely encounter:

IPX

You can use the IPX connection to challenge opponents over a LAN (Local Area Network). This function will search your network for Total Annihilation games running and display them in the Select Game screen. You will need the IPX protocol installed on your computer before this will work properly.

TCP/IP (INTERNET)

If supported by your LAN you can select TCP/IP or use TCP/IP to play over the Internet. Internet play will require Internet access via an Internet service provider or an online service provider.

If you have Internet access, be sure to check out www.totalannihilation.com using your web browser. Cavedog will post updates and give you the latest information about where you can go on the Internet to find other players. The TCP protocol must be installed for this to work properly.

MODEM

This connection option allows you to connect the modem on your machine directly to a modem on your opponent's machine.

PLAYING THE GAME

SERIAL

If you have a serial cable and two computers, you can connect them together and go one on one with a friend. Once the game is installed and the cable is hooked up, this function will search your serial port, getting you connected and ready for play.

SELECT GAME SCREEN

The Select Game screen appears when you select one of the above multi-player methods. For LAN or Internet based games, the Select Game screen lists the available games you can join and the preferences set by each game's host. Select a game by clicking on the appropriate name in the list. To join a game, enter your name in the name field and press the "Join" button to play. If the game's host allows watching, you can click the "Watch" button to be a passive observer. Note that some games may require a password in which case an additional field will appear on this screen for password entry. You will be rejected if you try to watch a game that has been set by the host to disallow watching, or if you join a password-protected game with an invalid password.

For modem and serial games, you will skip this area and proceed directly to the Battle Room screen after connection.

Name of Game: Identifies the individual games.

Map Name: Displays the name of the map.

Cmdr (Commander): Displays the Commander option. The death of your Commander may end your game, depending on this setting. Alternately, this may be set to Deathmatch mode, where you immediately rejoin the game with a new Commander when killed, but you lose your existing resources.

Ping: The ping displays the amount of time, in milliseconds, it takes your computer to send data to and from each of the other players in the Battle Room.

LoS: Displays Line of Sight setting (true, circular or none).

Map: Displays Mapping setting.

Metal: Displays the starting amount of metal.

Energy: Displays the starting amount of energy.

Plyrs: Indicates the number of players currently in game.

PLAYING THE GAME

Status: Reflects the current state of the game, which can be either IN GAME, IN LOUNGE, or CLOSED.

Your Name: Type your name in this field before joining or watching a game.

New: Create your own multi-player game. See Create New Game screen, below.

Update: Update the display. This searches for games that are being played on the network. It's a good idea to manually update the display from time to time to make sure you have the most up-to-date list of available games.

Watch: This option is only available if you are on a LAN, and allows you to observe other games. Note that some hosts may choose to block observers.

Join: Join the selected game.

Previous Menu: Takes you back to the Select Connections screen.

CREATE NEW GAME SCREEN

To begin a new game, select New on the Select Game screen. The following options will be available to you on the Create New Game screen:

Enter Game Name: Choose a name for your game.

Enter Your Name: Type in your name.

Password to Join: Set a password if you want to restrict who can play in your game. If you leave it blank, then anyone can join the game.

Next: Goes to the Battle Room screen. See Battle Room screen, below.

Previous: Return to the Select Game screen.

BATTLE ROOM SCREEN

This screen allows the game host to set the game configuration options, and the other players to configure their local settings. The following settings are displayed:

Player: Displays player names. Game hosts may reject players by clicking on their names and confirming the rejection.

Side: Choose ARM or CORE.

Color: Choose your unit color. You cannot choose a color that has already been claimed by another player.

Ally: Click the Ally button to form alliances with other players. You may form

PLAYING THE GAME

alliances with any combination of players, or none at all. Note that merely proposing an alliance with a player does not mean that an alliance has been formed. Only when the other player agrees to form an alliance with you will the ally symbol become complete. You can make or break alliances during the game.

Resolution: Each player may set their game's screen resolution. The resolution may not be changed after the game has started. Note higher resolutions may slow the game down, particularly if you have a slow machine. P100 or P133 machines should use screen sizes of 640 X 480.

Mem: Displays the amount of memory in each player's computer.

Ping: How long, in milliseconds, it takes to send or receive data from the other computers in the Battle Room. See Glossary at the back of the manual for more information.

Go: Each player clicks this button when ready to play. When everyone has 'clicked in' the host can then start the game.

SELECT MAP

This option allows the host to select the map to play on.

EDIT METAL

Adjust the starting metal for all players.

EDIT ENERGY

Adjust the starting energy for all players.

COMMANDER

GAME ENDS: The game ends when the Commander is destroyed.

GAME CONTINUES: The game will continue after the Commander is destroyed.

DEATHMATCH: The game will continue after the Commander is destroyed, but you will lose all resources and begin again with a new Commander.

LINE OF SIGHT

TRUE LoS: Terrain elevations affect unit's view.

CIRCULAR LoS: Elevation does not affect unit's view.

PERMANENT LoS: All mapped terrain is visible at all times.

PLAYING THE GAME

MAPPING MODE

UNMAPPED: The Commander starts on an unexplored map.

MAPPED: The Commander starts on a completely explored map.

LOCATION

RANDOM: Places the Commanders randomly on the battlefield.

FIXED: Places the Commanders at pre-determined locations on the map according to player order.

CHEAT CODES

DISABLED: Cheat codes are disabled.

ALLOWED: Cheat codes can be used.

WATCHING

ALLOWED: Players are allowed to watch the game.

DISABLED: Players are not allowed to watch the game.

GAME

OPEN: Players are allowed to join.

CLOSED: No additional players are allowed to join.

MAX UNITS

Set the maximum number of units per player.

BUILD RESTRICT

This menu allows the host to select units that can not be used in the game. Also, units can have build limits imposed so that only a limited number of units of that type can be built.

MESSAGE WINDOW

All player messages are displayed in this window.

MESSAGE BOX

Send messages to the other players in the Battle Room.

PREVIOUS MENU

Return to Select Game screen.

PLAYING THE GAME

OPTIONS MENU

You can bring up the Options Menu by pressing F2 during the game, or by clicking on the Options menu button in the lower left corner of the screen (this only appears when no units are selected).

SAVE GAME

Accessing the Options menu from the Main Battle screen will allow you to save a game in progress. The Save Game screen provides statistics on the selected game. A game may be saved either during a battle or just after a battle has finished.

LOAD GAME

Choose a game and continue playing from the point at which it was saved.

OPTIONS

You can set options before you start the game as well as during game play. The Options are described below.

BRIEFING

Displays the mission briefing.

END MISSION

Displays a dialog box that will allow you to exit Total Annihilation completely, restart the mission or return to the Main Menu.

RESUME

This accepts any changes you have made and resumes the game.

OPTIONS

SOUND

SOUND MODE: Choose Mono, 3D or Off.

VOLUME: Use the arrows to adjust the volume.

MUSIC

VOLUME: Use the arrows to adjust the volume.

CD PLAYER: This control panel will let you choose how you want the music to be played (all tracks, random tracks, no music, specific tracks affected by

PLAYING THE GAME

battle conditions, repeated track). If “Specify Tracks” is chosen, each song can be assigned to a different battle condition, so that different music will be played as events occur. Use the CD panel’s arrow buttons to choose a track and select the battle conditions it is to be played under. Note that if you insert your own music CD, you may be required to put the game CD back in between missions.

INTERFACE

Game speed: Sets the game speed. The faster the game speed the faster the units will move, and the more demand is placed on the computer’s CPU. If you find that the game is playing slow and jerky, try lowering the game speed.

Mouse speed: Sets mouse scrolling speed.

Screen scroll: Sets the screen scrolling speed when the cursor reaches the edge of the screen.

SCREEN TEXT DISPLAY

Unit chat: Set the degree of importance of unit chat you want displayed on the screen.

Text lines: Set the maximum number of chat lines to appear on the Main Battle screen.

MOUSE INTERFACE

The Left-Click interface uses the left button for all functions except de-selecting a unit and moving the mini-map view. Right-click inside the mini-map view and move the mouse to scroll the view around or right-click outside the mini-map view to immediately center the mini-map view over that point. This interface uses different cursors to identify specialized commands.

The Right-Click interface uses the right mouse button to command the selected unit to carry out its default action. With the Right-Click interface, the left button is used to move the mini-map view, select and deselect units, as well as special actions (in combination with the menu).

PLAYING THE GAME

VISUALS

Screen size: Adjust the resolution.

Gamma: Use the slider to adjust screen brightness.

Object rendering: Select shading preferences.

Shading: Turn on for shaded buildings

Anti-aliasing: Turn on to have buildings and units drawn with anti-aliasing.

Shadows: Turn on for units, land features, and buildings to have shadows.

RESTORE DEFAULTS

Restores all settings to default values.

UNDO CHANGES

Restores settings to those in effect at the beginning of the session.

OK

Keep changes and return to the Options menu.

CANCEL

Cancel all changes and return to the Options menu.

COMMANDER'S HANDBOOK

This section contains valuable reference material that you can keep handy and refer to as you play. Although you certainly don't need to memorize this material, the more you know, the stronger your game.

Refer to this section for a table of the keyboard commands, the unit build hierarchies for both the Arm and the Core, descriptions of the units and structures, and a glossary of terms used throughout the game and this manual.

KEYBOARD COMMANDS

ESC Cancels the current command before it is executed

CTRL1 - CTRL9 . . Assign the currently selected units to a squad

ALT1 - ALT9 . . . Activate (select) the previously assigned squad

B Select the Build menu for that unit

O Select the Order menu for the current unit

1 - 9 Select the menu for the current unit

, (comma) Select the previous menu for that unit

. (period) Select the next menu for that unit

~ (tilde) Toggle damage bars on the units

PAUSE Pause the game

F1 Display information on selected unit

F2 Bring up the Options menu

F3 Go to the unit that last reported/chatted information

F9 Screen capture, will Print screen to file
SHOT####.pcx

F12 Clear all chat messages

COMMANDER'S HANDBOOK

CTRL+A Select all of your units

CTRL+C Center screen and select your Commander

CTRL+D Self-destruct selected units (will toggle on and off)

CTRL+S Select all units currently on the screen

CTRL+Z Select all units of same type

A Give an attack order

G Give a guard order

M Give a move order

P Give a patrol order

S Give a stop order (cancel any previous orders)

D Use the Disintegrator Gun

C Give a capture order

R Give a repair order

E Give a reclaim order

H Share resources with another player

N Scroll to the next unit off screen

T Track the selected unit

- Reduce the game speed

+ Increase the game speed

SHIFT Hold down to queue up multiple commands

ENTER Activate the message bar

UNIT BUILD HIERARCHIES

COMMANDER

ARM

BASIC STRUCTURES

Solar Collector
Wind Generator

Energy Storage
Metal Storage

Metal Extractor
Metal Maker

Light Laser Tower
Radar Tower

Kbot Lab

Vehicle Plant

Airfield

Shipyard

Peewee
Hammer
Rocko
Jethro

Construction Kbot

Jeffy
Flash
Samson
Stumpy

Construction Vehicle

Peeper
Freedom Fighter
Thunder
Atlas

Construction Aircraft

Skeeter
Crusader
Lurker
Hulk

Construction Ship

Basic Structures

Sentinel
Defender
Guardian
Dragon's Teeth
Geothermal

Advanced Kbot Lab

Basic Structures

Sentinel
Defender
Guardian
Dragon's Teeth
Geothermal

Advanced Vehicle Plant

Basic Structures

Sentinel
Defender
Guardian
Dragon's Teeth
Geothermal

Advanced Aircraft Plant

Tidal Generator
Sonar Station
Torpedo Launcher

Advanced Shipyard

Zipper
Zeus
Fido
Invader
Eraser

Advanced Construction Kbot

Bulldog
Luger
Triton
Merl
Seer
Jammer
Spider

Advanced Construction Vehicle

Hawk
Phoenix
Brawler
Lancet

Advanced Construction Aircraft

Piranha
Ranger
Conqueror
Millenium
Colossus

Top Secret

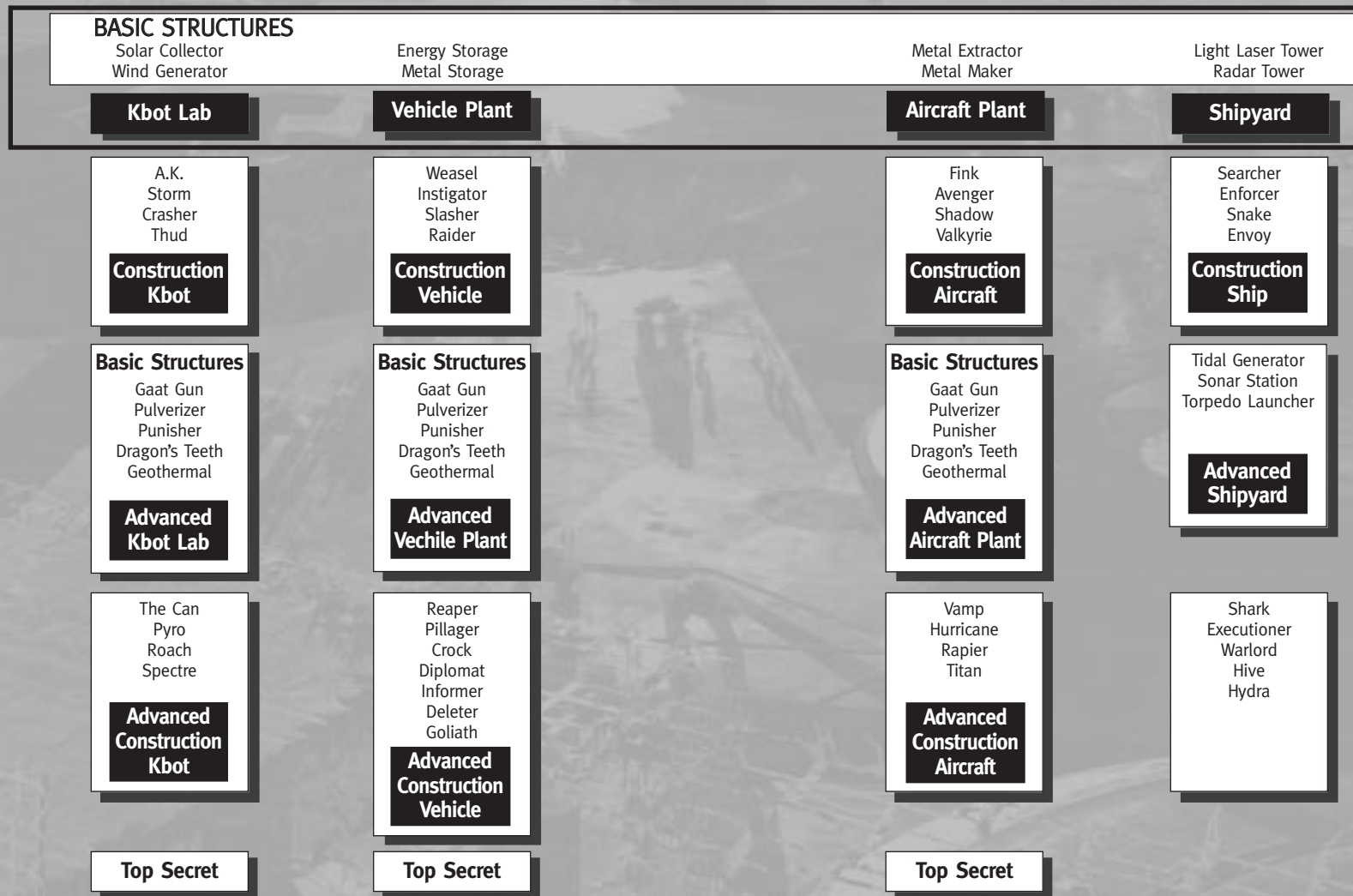
Top Secret

Top Secret

UNIT BUILD HIERARCHIES

COMMANDER

CORE



COMMANDER'S HANDBOOK

ARM UNIT DESCRIPTIONS THE COMMANDER



The Arm Commander is the ultimate weapon of war for the Arm side. Stepping onto a hostile planet, the Commander can build a war complex and conquer any world.

KBOTS - LEVEL 1



Infantry Kbot "PEEWEE"

A scout armed with dual energy machine guns, Peewee has a sophisticated suite of electronic warfare equipment which allows it to see other units at a longer than normal range. It is fast and very efficient on rough terrain and hills.



Artillery Kbot "HAMMER"

A medium power unit with a plasma cannon that allows indirect fire over hills.



Rocket Launcher Kbot "ROCKO"

Rockos can fire a high velocity rocket over a long distance.



Anti-Air Missile Kbot "JETHRO"

The Jethro fires guided missiles that specialize in taking out aircraft.

KBOTS - LEVEL 2



Fast Scouting Kbot "ZIPPER"

Zipper is a very fast Kbot designed for hit and run attacks. Its main defense is its speed. It is armed with a medium laser.



Four Legged Kbot "FIDO"

This heavy combat unit's job is to destroy everything that gets in its way. It has a short barrel gauss cannon which can inflict heavy damage. The high velocity shells have a flat trajectory.



Lightning Kbot "ZEUS"

A heavy fighter, the Zeus fires a lightning gun. The lightning gun is short ranged and must have a direct Line of Sight to the target.

COMMANDER'S HANDBOOK



Crawling Bomb "INVADER"

This is a crawling bomb. Have your Invader move up to a cluster of enemy units then self-destruct. An anti-matter explosion will destroy or damage all units in a wide radius.



Radar Jammer "ERASER"

This extremely useful unit can lay down a jamming field that will hide all friendly units in its vicinity. The Eraser has no weapons.

VEHICLES - LEVEL 1



Fast Attack Vehicle "JEFFY"

This fast scout unit's sensors allow it to spot the enemy at long range. It is fast, very inexpensive and is armed with a light laser.



Fast Assault Tank "FLASH"

This inexpensive light tank has a high ground speed and fires dual EMGs.



Surface to Air Missile Launcher "SAMSON"

Samson provides mobile surface to air missiles. Its job is to destroy enemy aircraft.



Medium Assault Tank "STUMPY"

Stumpy is a mid-sized tank armed with a medium plasma cannon.

VEHICLES - LEVEL 2



Heavy Assault Tank "BULLDOG"

This is the main battle tank. It has powerful armor and fires a heavy plasma cannon.



Amphibious Tank "TRITON"

Although Triton is a light tank with only moderate armor, it is completely amphibious and useful for driving the enemy off the beaches. It fires a medium plasma cannon.



Mobile Radar Jammer "JAMMER"

This unit jams the enemy's radar, preventing detection of your un-spotted units. It is easily destroyed so keep it away from the enemy.

COMMANDER'S HANDBOOK



Mobile Artillery "LUGER"

This has an anti-silver cannon. Although it can withstand some fire, its main purpose is to stay well back from the fight and arc shells into battle. The anti-matter slivers are less accurate than a plasma cannon. Its weapon can fire at ranges beyond its visibility, so it works best if other units can spot for it.



Mobile Rocket Launcher "MERL"

This vehicle fires rockets with high trajectories at the enemy. It has a relatively low rate of fire.



All Terrain Attack Vehicle "SPIDER"

Spider is actually a Kbot, but its huge size requires construction by the larger vehicle assembly plant. It fires a special paralyzer weapon that can stun the enemy.



Mobile Radar "SEER"

Seer is a small vehicle equipped with radar. It has no weapons.

SHIPS - LEVEL 1



Motor Boat "SKEETER"

This small scout has a good detection radius and is a fast seagoing vessel. Its missile launcher allows it to destroy aircraft.



Destroyer "CRUSADER"

Crusader's job is to find and destroy subs. These destroyers have good sonar range and rocket-launched smart depth charges that allow it to attack subs. It also has a medium cannon for surface engagements.



Submarine "LURKER"

The job of the submarine is to hide under the water and attack large ships with its torpedoes.



Amphibious Transport "HULK"

The Hulk moves ground units across water. Each transport can carry six ground units. It has no weapons.

COMMANDER'S HANDBOOK

SHIPS - LEVEL 2



Attack Submarine "PIRANHA"

This attack submarine is specifically designed to destroy other subs. Its sonar range is unmatched. Though it can shoot its torpedoes at surface ships, its smaller seeking torpedoes do not inflict as much damage as the normal submarine's torpedoes.



Missile Ship "RANGER"

Ranger has a guided missile launcher to drive off or destroy aircraft. It also has a pair of heavy rocket launchers for surface fights.



Cruiser "CONQUEROR"

The Conqueror can destroy anything on the water except a battleship. Although it has a relatively low rate of fire, it has the longest range of any naval unit, making it ideal for shelling inland targets. The Cruiser also has a depth charge launcher for attacking subs.



Battleship "MILLENIUM"

This is the premier weapon for destroying ships, with two huge batteries of heavy plasma cannons. Its ability to soak up damage is unequaled, but it is vulnerable to submarine and air attacks, and therefore requires an escort to keep these units away.



Light Carrier "COLOSSUS"

The Colossus acts as a base for aircraft at sea. It can service and repair two aircraft at a time and its small fission power plant will generate energy on the open water. The light carrier has no weapons but it has radar sensors to help find the enemy and coordinate the aircraft.

COMMANDER'S HANDBOOK

AIRCRAFT - LEVEL 1



Scout "PEEPER"

This small jet's job is to scout out the area. It is so small and fast that it is difficult to shoot it down. It has no weapons.



Fighter "FREEDOM FIGHTER"

Although the Freedom Fighter can fire at ground or sea units, its primary mission is to shoot down other aircraft.



Bomber "THUNDER"

Thunder can drop dozens of small bombs at ground targets or surface ships. It cannot fire at other aircraft, so it needs an escort if the enemy has fighters in the air. It flies at high altitudes.



Transport "ATLAS"

This unit can pick up a single ground unit and fly it anywhere. It has no weapons and if it is shot down when it is high in the air, the unit it's carrying is destroyed as well.

AIRCRAFT - LEVEL 2



Gunship "BRAWLER"

This is a VTOL gunship that can hover over the battlefield, firing dual EMGs at ground units or surface ships.



Stealth Fighter "HAWK"

The Hawk is a powerful fighter that is effective at attacking both air and ground targets. It has long range missiles and is invisible to radar so its best tactic is to stand well back and lob missiles into battle.



Strategic Bomber "PHOENIX"

Based on the successful Hurricane aircraft used by the Core, the Phoenix is designed to penetrate enemy air space.



Torpedo Bomber "LANCET"

The Lancet torpedo bomber carries heavy torpedoes for attacking surface ships or submarines. To attack a sub, another friendly unit must spot the sub on sonar. Its major weakness is its poor defense.

COMMANDER'S HANDBOOK

FORTIFICATIONS - LEVEL 1



Light Laser Tower "LLT"

This light weapon has a long range and can track all but the fastest units.

FORTIFICATIONS - LEVEL 2



Dragon's Teeth

These slow the movement of ground units.



Heavy Laser Tower "SENTINEL"

This two barrel laser tower is effective at stopping an enemy charge, but is out-ranged by units that can lob shells over the horizon. This means you can't rely on lasers alone for defense. Also, its energy requirements are so high that it needs to draw on outside power to fire.



Missile Tower "DEFENDER"

The Defender fires missiles at air or surface targets. It is the major anti-air defense.



Heavy Plasma Cannon "GUARDIAN"

Guardian is used as indirect artillery to fire over hills or other obstacles. It is also used for coastal defenses since its range is sufficient to trade shots with cruisers and battleships.



Torpedo Launcher

The Torpedo Launcher can fire torpedoes at ships or submarines.

MOBILE CONSTRUCTION UNITS - LEVELS 1 & 2

These units are similar so they are all described here. All can produce a small amount of energy. They each have a nano-lathe which enables them to build various buildings and fortifications. Additionally they can reclaim the metal from destroyed units, reclaim trees for extra energy and repair damaged units. A second level mobile construction unit can build its second level units, and also the basic building of its type in case it needs to revert to level 1 technology.

COMMANDER'S HANDBOOK

The level 2 mobile construction units are faster at building than the first level construction units.

If a unit is taking too long to build, and you have plenty of metal and energy, then additional construction units (of any type) can speed the construction. The additional construction units can add their nano-lathe streams to the item under construction. To order a construction unit to do this, order the assisting unit to 'repair' the unit being built.



Construction Kbot

Builds Level 1 & 2 fortifications and the Advanced Kbot Lab.



Advanced Construction Kbot

Builds Level 3 buildings and fortifications and the Kbot Lab.



Construction Vehicle

Builds Level 1 & 2 fortifications and the Advanced Vehicle Plant.



Advanced Construction Vehicle

Builds Level 3 buildings and fortifications and the Vehicle Plant.



Construction Ship

Builds Level 1 & 2 fortifications and the Advanced Shipyard.



Construction Aircraft

Builds Level 1 & 2 fortifications and the Advanced Aircraft Plant.



Advanced Construction Aircraft

Builds Level 3 buildings & fortifications and the Aircraft Plant.

COMMANDER'S HANDBOOK

CONSTRUCTION BUILDINGS - LEVELS 1 & 2

All construction buildings have nano-lathes that can build units. The nano-bots used are somewhat specialized. For example, nano-bots for aircraft are made of lighter substances and require strong, high temperature alloys, while ships need to be constructed from non-corrosive materials. All buildings can store small amounts of energy and metal.

Advanced construction buildings have smaller and more powerful factories for making more sophisticated units. They also make the basic mobile construction unit for that technology line, (in case they want to go back and build level 1 technology).



Kbot Lab

The Kbot Lab can build Construction Kbots, and the first level Kbots.



Advanced Kbot Lab

An Advanced Kbot Lab can build Advanced Construction Kbots, and technology level 2 Kbots.



Vehicle Plant

A Vehicle Plant can build Construction Vehicles, and the first level vehicles.



Advanced Vehicle Plant

An Advanced Vehicle Plant can build Advanced Construction Vehicles, and second level vehicle technology.



Aircraft Plant

An Aircraft Plant can build Construction VTOLs, and technology level 1 aircraft.



Advanced Aircraft Plant

An Advanced Aircraft Plant can build Advanced Construction VTOLs, and technology level 2 aircraft



Shipyard

A Shipyard can build Construction Ships, and first level ships.

COMMANDER'S HANDBOOK



Advanced Shipyard

An Advanced Shipyard can build the technology level 2 ships.

OTHER BUILDINGS - LEVELS 1 & 2



Radar Tower

The Radar Tower contains a set of sensors for locating enemy units. It can detect (but not identify) the enemy at long range. All the radar information from each unit is organized and displayed on the mini-map.



Sonar Station

The Sonar Station can locate units that travel underwater, and displays the information on the mini-map.



Metal Extractor

This is used to extract metal from the ground. Metal Extractors are best placed over metal deposits though they can find a little metal anywhere. The faster a Metal Extractor spins, the more metal it is extracting.



Metal Maker

The Metal Maker requires no metal to build, but is very expensive in terms of energy. Normally used only on very low metal planets.



Metal Storage

Increases metal storage capability.



Solar Collector

A simple and dependable form of power generation that uses radiant light energy.



Tidal Generator

These collect power based on the tides on that world.

COMMANDER'S HANDBOOK



Wind Generator

A Wind Generator produces a variable amount of power based on wind speed.



Energy Storage

Increases energy storage capability.



Geothermal Powerplant

This Geothermal Powerplant must be built over a geothermal vent (a spot with steam rising from the ground).

CORE UNIT DESCRIPTIONS THE COMMANDER



The mind of a military genius patterned into a soulless killing machine. Armed with the awesome Disintegrator Gun and capable of building a massive military machine that can destroy anything in its path.

KBOTS - LEVEL 1



Infantry Kbot "A.K."

This scout can see units at long range and is armed with a laser. It is fast and good on rough terrain and hills.



Anti-air Kbot "CRASHER"

Crasher uses guided missiles specialized in destroying aircraft.



Rocket Launcher Kbot "STORM"

Storm has Heavy Armor and fires rockets.



Artillery Kbot "THUD"

The Thud is a heavy fighter with a plasma cannon.

COMMANDER'S HANDBOOK

KBOTS - LEVEL 2



Flame Thrower Kbot "PYRO"

Pyro is armed with a short range flame thrower.



Universally Deployable Assault Bomb "ROACH"

Roach has an anti-matter bomb. When it self-destructs, the huge explosion will kill or damage units everywhere in the area.



Heavy Artillery Kbot "THE CAN"

While very slow, The Can can take a lot of punishment. It is armed with a heavy plasma cannon.



Radar Jammer "SPECTRE"

The Spectre is not armed but it has a powerful jamming field that blocks enemy radar around it.

VEHICLES - LEVEL 1



Scouting Vehicle "WEASEL"

The Weasel is a lightly armed scouting vehicle that can see the enemy at long range.



Light Recon Tank "INSTIGATOR"

The Instigator is equipped with a light laser and has minimal armor.



Mobile Missile Launcher "SLASHER"

This unit is armed with surface to air missiles (SAMs).



Medium Assault Tank "RAIDER"

The Raider is a medium size battle tank. It is armed with a plasma cannon.

COMMANDER'S HANDBOOK

VEHICLES - LEVEL 2



Mobile Artillery "PILLAGER"

This is the Core's main mobile artillery. It uses an anti-silver cannon to lob high explosives at the enemy.



Heavy Assault Tank "REAPER"

This is the Core's main battle tank. It has a heavy plasma cannon and three layers of Heavy Armor.



Amphibious Tank "CROCK"

This amphibious medium-size tank is armed with a plasma cannon.



Mobile Heavy Rocket Launcher "DIPLOMAT"

The Diplomat has a two stage, long range rocket.



Mobile Radar "INFORMER"

This is an unarmed vehicle with powerful radar.



Radar Jammer "DELETER"

The Deleter prevents the enemy's radar from working within a certain radius. Only vehicles within visible range of an enemy unit will appear on the enemy's mini-map display.



Super Heavy Tank "GOLIATH"

The Goliath is the largest tank on the battlefield.

SHIPS - LEVEL 1



Scout Ship "SEARCHER"

The Searcher's array of sensors allows it to detect the enemy at a greater range than normal units. It is armed with guided missiles and a laser turret.

COMMANDER'S HANDBOOK



Destroyer "ENFORCER"

A destroyer has sonar, depth charges and a plasma cannon. It is the main anti-submarine warfare ship in the Core's arsenal.



Submarine "SNAKE"

A submarine has sonar and is armed with two torpedo tubes. Torpedoes do a great deal of damage, but are unguided.



Transport Ship "ENVOY"

This transport ship can move eight ground units across the water.

SHIPS - LEVEL 2



Sub Killer "SHARK"

This is a hunter-killer submarine with guided torpedoes designed to find and kill enemy submarines.



Missile Frigate "HYDRA"

This light ship has an anti-air missile battery and a large rocket launcher.



Cruiser "EXECUTIONER"

The cruiser has sonar and depth charges for fighting subs and a long range plasma cannon for surface fighting.



Battleship "WARLORD"

The Warlord is designed to destroy surface ships and coastal batteries.



Light Carrier "HIVE"

Hive acts as a staging area for aircraft. It can maintain and repair all sorts of aircraft, and has a reactor on board to provide power. It also has a radar for directing air strikes.

COMMANDER'S HANDBOOK

AIRCRAFT - LEVEL 1



Scout "FINK"

This air scout has good visibility range.



Fighter "AVENGER"

The Avenger is armed with air to air missiles for destroying other aircraft.



Bomber "SHADOW"

This high altitude bomber drops cluster munitions on ground and sea targets.



Air Transport "VALKYRIE"

This transport can pick up a ground unit and fly it anywhere. If it is destroyed its passenger is destroyed as well.

AIRCRAFT - LEVEL 2



Gunship "RAPIER"

This gunship carries rockets for shooting ground units. It is heavily armored.



Stealth Fighter "VAMP"

The Vamp fires a pair of air to air missiles. It has stealth technology so it will not appear on the enemy radar.



Strategic Bomber "HURRICANE"

The Hurricane is a bomber capable of delivering a heavier payload than the Shadow. It also has a coaxial mounted laser turret for engaging enemy aircraft.



Torpedo Bomber "TITAN"

The Titan is a torpedo bomber designed for attacking subs or surface ships. The torpedoes can do very heavy damage, but are unguided.

COMMANDER'S HANDBOOK

FORTIFICATIONS - LEVELS 1 & 2



Light Laser Tower

The Light Laser has a long range and can fire at aircraft as well as normal targets.



Dragon's Teeth

This barrier is designed to slow down enemy ground vehicles. It is very strong and it takes a lot of hits to destroy one.



Heavy Laser Tower "GAAT GUN"

This two barrel laser tower is effective at stopping an enemy charge. The energy requirement is so high that it needs to draw on outside power to fire.



Launcher "PULVERIZER"

Pulverizer fires missiles at ground or air targets. It is the major anti-air fortification.



Torpedo Launcher

The Torpedo Launcher can fire torpedoes at ships or submarines. It has a short ranged sonar that allows it to shoot at submarines.



Long Range Plasma Cannon "PUNISHER"

The Punisher is a heavy fixed plasma cannon. Its long range makes it both an effective base and coastal defensive weapon.

COMMANDER'S HANDBOOK

MOBILE CONSTRUCTION UNITS - LEVELS 1 & 2

These units are similar so they are all described here. All can produce a small amount of energy. They each have a nano-lathe that allows them to build various buildings and fortifications. Additionally they can reclaim the metal from destroyed units, reclaim trees for extra energy and repair damaged units. A second level mobile construction unit can build its second level units, and also the basic building of its type in case it needs to revert to level 1 technology.

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Advanced Construction Kbot

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Advanced Construction Vehicle

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COMMANDER'S HANDBOOK



Construction Ship

Builds Level 1 & 2 fortifications and the Advanced Shipyard.



Construction Aircraft

Builds Level 1 & 2 fortifications and the Advanced Air Plant.



Advanced Construction Aircraft

Builds Level 3 buildings & fortifications and the Air Plant.

CONSTRUCTION BUILDINGS - LEVELS 1 & 2

All construction buildings have nano-lathes that can build units. The nano-bots used are somewhat specialized. For example, nano-bots for aircraft are made of lighter substances and require strong, high temperature alloys, while ships need to be constructed from non-corrosive materials. All buildings can store small amounts of energy and metal.

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Advanced Kbot Lab

An Advanced Kbot Lab can build Advanced Construction Kbots, and technology level 2 Kbots.

COMMANDER'S HANDBOOK



Vehicle Plant

A Vehicle Plant can build Construction Vehicles, and the first level vehicles.



Advanced Vehicle Plant

An Advanced Vehicle Plant can build Advanced Construction Vehicles, and second level vehicle technology.



Aircraft Plant

An Aircraft Plant can build Construction VTOLs, and technology level 1 aircraft.



Advanced Aircraft Plant

An Advanced Aircraft Plant can build Advanced Construction VTOLs, and technology level 2 aircraft.



Shipyard

A Shipyard can build Construction Ships, and the first level ships.



Advanced Shipyard

An Advanced Shipyard can build the technology level 2 ships.

OTHER BUILDINGS - LEVELS 1 & 2



Radar Tower

The Radar Tower detects the location of enemy units at long range. All of the radar information is displayed on the mini-map.



Sonar Station

The purpose of the Sonar Station is to detect submarines that may be in the area. Subs are always hidden unless they are in the range of a sonar.

COMMANDER'S HANDBOOK



Metal Extractor

Place metal extractors over metal ores in order to collect metal as quickly as possible. The faster a Metal Extractor spins, the faster it is collecting metal.



Metal Maker

This requires no metal to build, but is very expensive in terms of energy. It 'creates' valuable metals using vast amounts of energy.



Metal Storage

This will increase metal storage capacity.



Solar Collector

A simple and dependable form of power generation that uses ambient light energy.



Tidal Generator

These collect power based on the tides on that world.



Wind Generator

A Wind Generator produces a variable amount of power based on wind speed.



Energy Storage

This will increase energy storage capacity.



Geothermal Powerplant

This must be built over a geothermal vent (a spot with steam rising from the ground).

GLOSSARY

Anti-matter: Like normal matter but with the opposite charge and magnetic moment. When anti-matter and normal matter combine, they turn completely into energy, releasing vast floods of gamma rays. Anti-matter is used extensively for weapons and for energy storage where extraordinary energy density is required.

Commanders: Commanders have anti-matter backpacks for power, blueprints and nano-lathes which allow them to, in a matter of hours, build up whole military industrial complexes, and special nano-technology born viruses which allow them to capture the intelligences running other war machines. Not expecting reinforcements for days or weeks after moving through a Galactic Gate onto a planet, the Commander must conquer or be destroyed.

Defeat in Detail: This is a strategic term where a Commander tries to bring the entire force against a small fraction of the enemy's forces. The Commander's forces win with little loss, and then the process is repeated. Generally an officer should be alert for opportunities to attack small groups of enemy units with larger forces.

Depth Charge: Depth charges are normally fired from short ranged rockets which will carry the weapon over the section of the sea where the submarine is suspected to be. The depth charge then turns on its passive sonar and silently guides itself down to the enemy submarine. It uses no power; only gravity is pulling it downwards.

When the depth charge senses it is close enough, it detonates an anti-matter warhead. This huge explosion is transmitted well through the water and if it is close enough will crush any sub.

Disintegrator: This is an 'ultimate' weapon: no physical matter provides protection from it. It works by suppressing the quantum field strength of the 'gluons' that hold together atomic nuclei. The matter violently tears itself apart, leaving hydrogen, deuterium and a burst of free neutrons. This is the major advantage of Disintegrators: anything is destroyed and Heavy Armor provides virtually no protection.

The weapon has a number of disadvantages: First the matter is disintegrated so no metal salvage is possible. Second, the weapon is short ranged, partly because of the inherent physical limitations of reasonably sized projectors,

GLOSSARY

and partly due to atmospheric attenuation of effect. The most severe restriction is the vast amount of energy required to fire it.

A useful attribute of the weapon is that it damages everything in a cone of effect so it can destroy several units that are clustered together.

Energy: Energy is not displayed until it has been transformed into electrical power. Forms of energy generation with low energy densities (such as wind and tidal power) become much more useful when efficient energy storage devices are created. The Commander uses a superconducting ring to store electricity with no losses other than a low expense in cooling the rings.

Energy Cannon / Energy Shells: Energy cannons are similar to standard cannons, except that they fire energy shells. Energy shells are very powerful lasers which fire for several seconds and are 'frozen' in a tiny grid of space time. This grid is then launched in a manner similar to a rail gun, (but using vacuum fluctuations rather than electro-magnetic fields).

When the energy shell reaches the target, the entire energy is given off at once in a near microscopic area. No armor can withstand the temperatures generated, and the spray of metal plasma destroys the interior of the target (the spray of plasma is forced inside the unit by the intense light pressure). This weapon has a flat trajectory and only does damage to the unit struck.

Flame Thrower: Unlike ancient flame throwers, modern flame throwers use plasma beams that can be used on planets with no air or oxygen.

Firing at targets in woods is most effective because the burning forest adds its own heat to the flame thrower's.

Galactic Gates: Central to interplanetary travel are Galactic Gates. Allowing small groups of people to step through them onto a new world, they allowed the colonization of the galaxy. However since one was required to pump energy into a Galactic Gate generator for weeks to open one, and then it collapsed as soon as a couple thousand kilos moved through it, it seemed that purely military conquest was impossible on established planets. The development of the Commanders completely changed this. One Commander with a nano-lathe & immensely powerful weapons could attempt to conquer a whole planet.

Gauss: A measure of magnetic strength. Gauss cannons use magnetic fields

GLOSSARY

to accelerate shells at very high velocities.

Guided Missiles: A guided missile has a sophisticated guidance package that allows it to steer itself into the target. They normally carry a small amount of anti-matter as a payload.

Heavy Armor: Many times more dense than its ancient counterpart, heavy armor is so resilient that, for an equal amount of protection, less weight is needed than traditional armor. This has led to its near universal adoption as the protection of all military units. However if it, or the generators that are maintaining it, are severely damaged, then it tends to catastrophically fail. It works by artificially strengthening and compressing matter to make the whole of the outside of the vehicle one giant molecule.

Hypergolic Propellants: This is a class of rocket fuel that automatically starts to burn when the fuel is mixed with the oxidizer. They are extremely reliable, and need no igniter.

Kbot: Short for Kinetic Bio Organic Technology, these are a class of war machines that are noted for legs that can step over rough terrain, and often have a human-like physical structure. They use a rugged artificial material known as Memcomposite to move their limbs.

Lasers: A generic term for any sort of weapon that directs an "energy" beam. As well as the traditional lasers of coherent light, coherent matter beams and certain classes of pseudo boson beams are also included.

Lightning Gun: This is a projected stream of charged pseudo-baryons which can penetrate Heavy Armor more effectively than normal electric charges.

Line of Sight (LoS): If a unit can see another unit there is a Line of Sight between the two. LoS can be blocked by hills.

Memcomposite: This is an acronym: Many times Extendable Mezzo Composite material. It is also known as memory composite because it will remember its original shape and density after expanding. It acts as both muscle and tendons for Kbot's articulating limbs.

Metal: Nano-bots are made of metal. While non-metallic elements used to build the nano-bots are used in quantity, the rare elements which limit production are a variety of heavy metals, so the raw material need to build

GLOSSARY

nano-bots has come to be known generically as "metal".

Metal will not show up on a Commander's display until it has been formed into nano-bots ready to be teleported.

Micron: A micro-meter; one millionth of a meter. Most nano-bots are a micron or less across.

Moho: Short for Mohorovicic Discontinuity. This is the boundary between a planet's crust and mantle. A Moho Metal Extractor will drill down approximately 10 to 50 km to find dependable metal sources and rare elements.

Nano: Means 1/1,000,000,000. A nanometer is one, one billionth of a meter.

Nano-lathing: Tiny robots (10 microns across or less) are sprayed onto a powered skeleton. They each 'know' allowable places they may link up (as well as being guided by the powerful intelligence within the nano-lathing unit) and as they settle into position they fuse creating solid material. Then a second stage of nano-lathing occurs where highly specialized nano-bots seek out precise locations on this skeleton to form optical links, weapon systems, intelligences, and other internal components.

Provided there is a blueprint, anything can be built with nano-lathing.

Nano-bot: A nano-bot is a robot that has components on the nanometer scale, that is, its components that are made up of individual atoms or groups of atoms. These tiny robots can, in great numbers, be used to build any object

Ore: This is an economic term. If a mineral deposit worth developing it is considered ore. An ore body is a good place for a metal extractor, and looks like a rough section of shiny rocks. The more shiny rocks visible, the better the ore body.

Ping: Shows ping time for each game. A 'ping' is a short message to the computer you are playing against. The other computer will instantly reply. The amount of time that this takes is the ping time. If you have a slow ping time you can lower the simulation speed to improve game play.

Plasma Cannon: This fires a spherical force field with a highly pressurized 10,000,000 degree plasma tightly contained within it. When the force ball touches the target, the force field dissolves on the side touching the target and the plasma burns through the target's armor. Simple heat and thermal shock may cause the kill. Heavy Armor is moderately vulnerable to high

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temperatures and multiple hits by plasma cannons can cause its breakdown.

Plasma cannons can be direct fire weapons, or their plasma shells may be used as indirect artillery when firing over hills.

Rocket: This is a generic name for a wide variety of weapon systems. Generally they have a preprogrammed flight path to prevent an unsophisticated guidance package from being completely fooled by the ordinary 'weak cloaking' and electronic spoofing that all units possess. They carry a larger payload than a smarter missile and this payload is almost invariably a small amount of anti-matter.

Starburst Missile: A starburst missile is fired relatively slowly at an almost vertical trajectory. When it reaches the top of its trajectory, it looks down and locates its target. It reorients itself and fires its second stage hypergolic rockets. Accelerating at over 100 gravities, it smashes down like a meteor on top of the target. It has a small anti-matter payload.

Tactically starburst missiles fulfill the job of the old fashioned mortars. They can fire at units inside deep canyons and are effective at destroying small fast units that can foil other weapons.

Torpedo: Torpedoes are high speed missiles designed for underwater use. Torpedoes move through the water by inducing a pseudo-electric charge in the water around it and then pulling itself forward with coupled electric charges in its skin. They use a large anti-matter charge to create a huge explosion.

VTOL: Short for Vertical Take Off & Landing, this is the designation given to air craft that can take off or land by moving straight up and down. Such vehicles are very flexible since they do not need to be based near a runway.

HOW TO CONTACT US

Prior to calling us, visit the Technical Support section of our web site for up to date information at

<http://www.cavedog.com>

If you require additional help and need to call Tech support directly, please have the following information ready:

- A description of the problem
- The name of the computer manufacturer
- The speed and type of CPU
- How much RAM is in the computer
- Type of sound card
- Type of video card

No game play hints will be given from the Technical Support number.

Technical Support

In the case of faulty disks, you should return the disks **ONLY**, not the packaging. Return the disks with a covering letter containing details of the fault, your name and address to: GT Interactive Software (Europe) Ltd., Willow Grange, Church Road, Watford, Herts. WD1 3OA, United Kingdom.

We will attempt to replace the disks within 28 days of receipt.

If you encounter technical problems with the disks you should write to the above address or call the Technical Helpline which operates between the hours of 9am and 6pm (Central European Time), Monday - Friday, please ensure that you are sitting in front of your computer or have full details of your computer configuration and the problem you are encountering with you when you call.

English speaking customers call 01923 209145.

In Australia: Call the Games Hotline 1900 957 665.

NOTE: Please have a copy/printout of your CONFIG.SYS, AUTOEXEC.BAT and system details when contacting us. Please also have a copy of your system's memory details – This can be obtained by typing MEM the MS-DOS prompt.

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| Orchestration | Larry Kenton |
| Computer Score Transcription | Benoit Grey |
| Orchestra Contractor | Simon James |
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